



Docket No.: END919980129US2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: D. E. Chrzanowski et al.

Group Art Unit: 1771	:	IBM Corporation
Examiner: Elizabeth M. Cole	:	Intellectual Property Law
Serial No.: 09/829,474	:	Dept. N50, Bldg. 040-4
Filed: 04/09/01	:	1701 North Street
Title: WIRE BONDING METHOD AND APPARATUS	:	Endicott, NY 13760

#15

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(Date of Deposit)
Georgia Y. Brundage
Georgia Y. Brundage
1-17-03
Date

Assistant Commissioner For Patents
Washington, D.C. 20231

RESPONSE

Dear Sir:

This is in response to the Office Action mailed on 10/24/02.

The Examiner finds the drawings at Figures 3-5 objectionable under M.P.E.P. § 602.02(g). Proposed corrections to Figures 3-5 have been made. Figures 3-5, sheets 1/5, 3/5, and 4/5, respectively, have been designated by a legend -- PRIOR ART --, as required by the Examiner. The objection being overcome, withdrawal is urged.

A copy of sheets 1/5, 3/5, and 4/5, respectively, are included herewith for the Examiner's and Official Draftsperson's review.

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The headings on sheets 1/5-5/5 have also been amended. Copies of sheets 2/5 and 5/5 are also included herewith for the Examiner's and Official Draftsperson's review. Sheets 1/5-5/5 accompany a letter to the Official Draftsperson.

Regarding the unavailability of the parent application at the time of the action, Applicants have included herewith another full copy (16 pages) of the parent application, and a copy of the Preliminary Amendment, mailed on April 9, 2001, for use by the Examiner. Applicant's hereby request consideration of all the documents filed in the Information Disclosure Statement and PTO-1449 form in the patent application and a review of the claims now pending in the patent application.

Support being fully provided for all the above amendments, the amendments do not constitute the addition of new matter and entry is urged.

Claims 1-12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-107,112. Applicants respectfully traverse this rejection.

Regarding the rejection of independent claim 1, as stated by the Examiner, JP 11-107,112 does not teach that the spaces between the fibers of a sheet should be less than or equal to the diameter of a wire positioned on the surface of the sheet. The Examiner alleges that it would have been obvious to a person having ordinary skill in the art to optimize the spacing between the fibers in order to enhance the efficiency of processes which employ the glass cloth, since JP 11-107,112 recognizes that the weave density is a result effective variable. Applicants respectfully disagree with the Examiner. Applicants direct the Examiner to the Detailed Description of the Invention of JP 11-107,112, wherein the invention is described as an improvement to the glass fabrics used as a base material in making a printed circuit board. This improvement minimizes anisotropy in the length and width direction during manufacture of the printed circuit board. JP 11-107,112 goes on to describe the importance of the ratio of textile density of the length and width threads of the fabric and the crimp percentage of the length and width threads of the fabric to the anisotropy improvement of the length and width dimensions of the resultant circuit board. No where does JP 11-107,112

teach or suggest a closed woven mesh having strands whose separation distance is equal to or less than the diameter of a wire positioned on the surface of a substrate which includes the closed woven mesh. The advantages of Applicant's invention of claim 1 is that it adequately supports a circuit pad 14 from collapse during a wire bonding process (see page 9, lines 7-10 and Figure 6). JP 11-107,112 completely fails to recognize the support advantages associated with the separation distance between woven mesh strands. The advantages of the invention of JP 11-107,112 is that it reduces variation of dimension and molding time dispersion of the printed wiring board enabling accurate positioning of components in standard holes. Therefore, Applicants submit that it is not obvious to arrive at Applicant's invention of independent claim 1 from the description in JP 11-107,112 and the structure as taught in independent claim 1 is allowable over JP 11-107,112. Allowance of this claim is urged.

Regarding the rejection of dependent claims 2-6 these claims depend directly from claim 1 and are considered allowable for the reasons given above.

Regarding the rejection of independent claim 7, as stated by the Examiner, JP 11-107,112 does not teach that the spaces between the fibers of a sheet should be less than or equal to the diameter of a wire positioned on the surface of the sheet. The Examiner alleges that it would have been obvious to a person having ordinary skill in the art to optimize the spacing between the fibers in order to enhance the efficiency of processes which employ the glass cloth, since JP 11-107,112 recognizes that the weave density is a result effective variable. Applicants respectfully disagree with the Examiner. As previously described, Applicants direct the Examiner to the Detailed Description of the Invention of JP 11-107,112, wherein the invention is described as an improvement to the glass fabrics used as a base material in making a printed circuit board. This improvement minimizes anisotropy in the length and width direction during manufacture of the printed circuit board. JP 11-107,112 goes on to describe the importance of the ratio of textile density of the length and width threads of the fabric and the crimp percentage of the length and width threads of the fabric to the anisotropy improvement of the length and width dimensions of the resultant circuit board. No where does JP 11-107,112 teach or suggest a closed woven mesh having warp and weave strands, whose separation distance is equal to or less than the thickness of a wire positioned on the surface of a

substrate which includes the closed woven mesh. The advantages of Applicants invention of independent claim 7 are identical to those of independent claim 1, described above. The advantages of the invention of JP 11-107,112 are previously described. JP 11-107,112 completely fails to recognize the support advantages associated with separation distance of the wrap and weave strands. Therefore, Applicants submit that it is not obvious to arrive at applicants invention of independent claim 7 from the description in JP 11-107,112 and the structure as taught in independent claim 7 is allowable over JP 11-107,112. Allowance of this claim is also urged.

Regarding the rejection of claims 8-12, these claims depend directly from claim 7 and are considered allowable for these reasons stated above.

The Application is deemed in condition for allowance and such action by the Examiner is urged. Should differences remain, however, which do not place one/more of the remaining claims in condition for allowance, the Examiner is requested to phone the undersigned at the number provided below for the purpose of providing constructive assistance and suggestions in accordance with M.P.E.P. Sections 707, 707.07(d) and 707.07(j) in order that allowable claims can be presented, thereby placing the application in condition for allowance without further proceedings being necessary.

Dated: 1/16/03

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Respectfully submitted,

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APPARATUS

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Date

Assistant Commissioner For Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Please amend the above-identified application as follows:

IN THE SPECIFICATION:

Please add the following paragraph at page 1, line 8.

--Cross Reference to Copending Application

This application is a divisional application of S.N. 09/347,580, filed 07/01/99.--

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COPY